Public Health Preparedness District 2 Influenza Survey

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In January 2005, the public health group of Public Health Preparedness District 2 decided that a survey of the number of health care workers in public health departments, hospitals, and nursing homes or assisted living facilities who receive the influenza vaccine would be useful in directing future educational efforts. The 2004-2005 influenza season, however, proved to be a challenge when Chiron, one of the nation's vaccine producers, developed quality assurance problems which led to the shortage of nearly half of the vaccine supply available to the public in the United States.

With the imminent shortage, the Centers for Disease Control and Prevention (CDC) recommended that limiting the vaccine to those at greatest risk would be the best strategy in protecting the public. This included children ages 6-23 months, adults ages 65 years and older, persons ages 2-64 years with chronic medical conditions, pregnant women, children ages 6-18 years on chronic aspirin therapy, **health care workers with direct patient contact**, and out-of-home caregivers and household contacts of children aged <6 months. Healthy people ages 5-49 years had the option of receiving the nasal spray, attenuated influenza vaccine.

The District 2 survey was created to gather information, as well as to provide each county the opportunity to build relationships with other public health partners in their communities by identifying a contact person at each facility. It would also provide the county with an estimated number of health care workers in the county broken out by direct patient contact and non-patient contact. The public health group intends to continue to conduct this survey annual to document educational efforts and improve relationships and reporting.

Within the 7 counties that comprise District 2, 43 facilities completed the survey: 4 assisted living facilities, 4 health departments, 6 hospitals, 28 nursing/long term care facilities, and 1 student medical center.

Aggregate Results of the Survey

The word "Employees" refers to health care workers both with patient and non-patient contact unless otherwise stated.

	Total Number of Employees	**Total Employees Vaccin. 2004-05**	**Percent Vaccinated**
Elkhart	1,299	739	57%
Fulton	340	177	52%
Kosciusko	1,395	419	30%
Marshall	811	363	44%
Pulaski	195	83	42%
St. Joseph	1,194	391	33%
Starke	0	0	0
Totals	**5,234**	**2,172**	**42%**

Vaccine available at reduced or no cost to employees
Out of the 43 facilities surveyed, 41 offered the vaccine at a reduced or no cost to those employees who wanted it.

Number of Cases reported in 2004-2005 Influenza Season 311

Number of Cases reported in 2003-2004 Influenza Season 340

Employees with Patient Contact 40% of employees have direct patient contact.

County	Employees with Patient Contact Vaccinated	Total # of employees vaccinated without patient contact.
Elkhart	645	54
Fulton	138	39
Kosciusko	280	139
Marshall	295	68
Pulaski	62	21
St. Joseph	354	37
Starke	0	0
Totals	**1,774**	**358**

Percentage Vaccinated That Have Regular Patient Contact by County

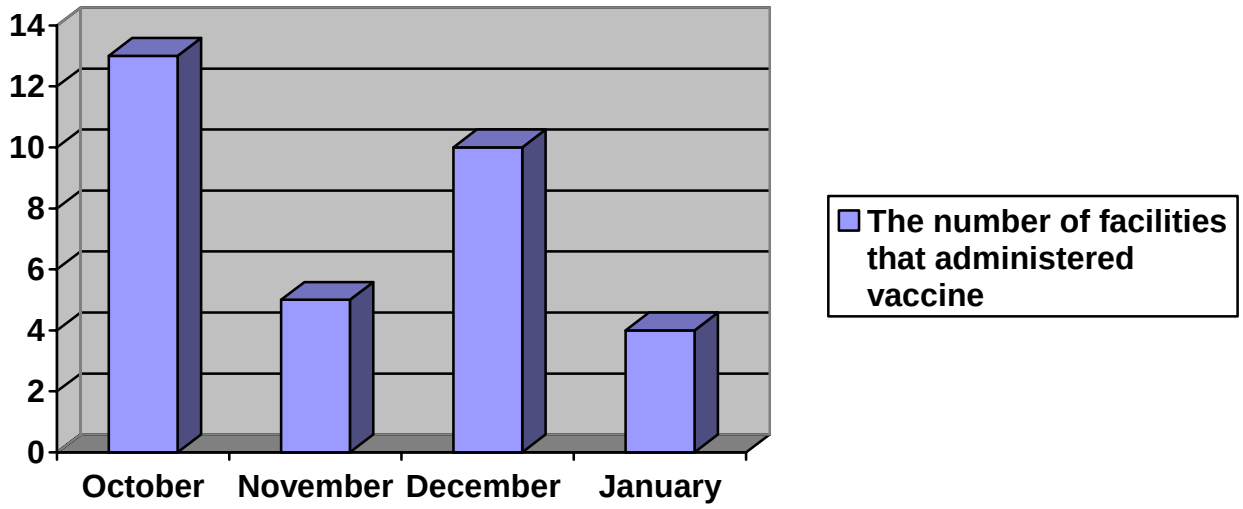
Elkhart	49%
Fulton	40%
Kosciusko	20%
Marshall	36%
Pulaski	31%
St. Joseph	29%
Starke	
Total	**34%**

As the 2004-2005 season progressed and appeared to be falling into a more “typical” seasonal pattern, as opposed to the 2003-2004 season in which the peak came early and caused significant morbidity earlier, the shortage proved to be less of an issue. By December, the CDC began to expand its recommendations for restrictions, and vaccine was available to a larger percentage of the population.

According to the CDC Behavioral Risk Factor Surveillance System (BRFSS) 2005 Flu Vaccination Report, nationwide 45.9 percent of health care workers (HCW) with patient contact had received an influenza vaccine in the past 12 months. In that same report, 34.7 percent of the adults in any of the priority groups had received an influenza vaccination, and in the Midwest, that number shrank to 25.5 percent. In the same report, of the adults in any of the priority groups, that received an influenza vaccination; and in the Midwest, that number shrinks to 25.5 percent.

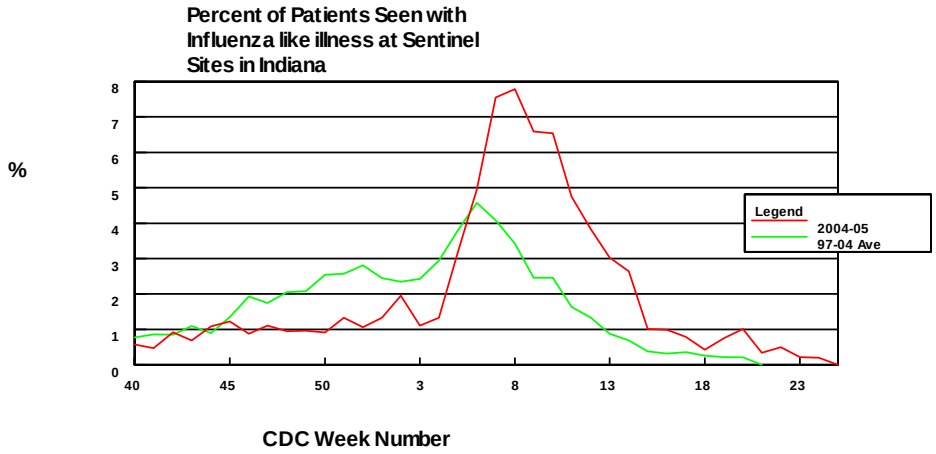
According to the District 2 survey, most of the HCW received the vaccine in October when the vaccine is typically available. In the 2004-2005 season, this was prior to the announcement of the shortage. However, once the shortage was announced and the recommendation from CDC for vaccination was released, the number of HCW who received the vaccine also dropped. In December when the recommendations were expanded, there was an increase in the number of HCW who received the vaccine, with a decline in January, when there was sufficient vaccine available (Figure 1).

Figure 1



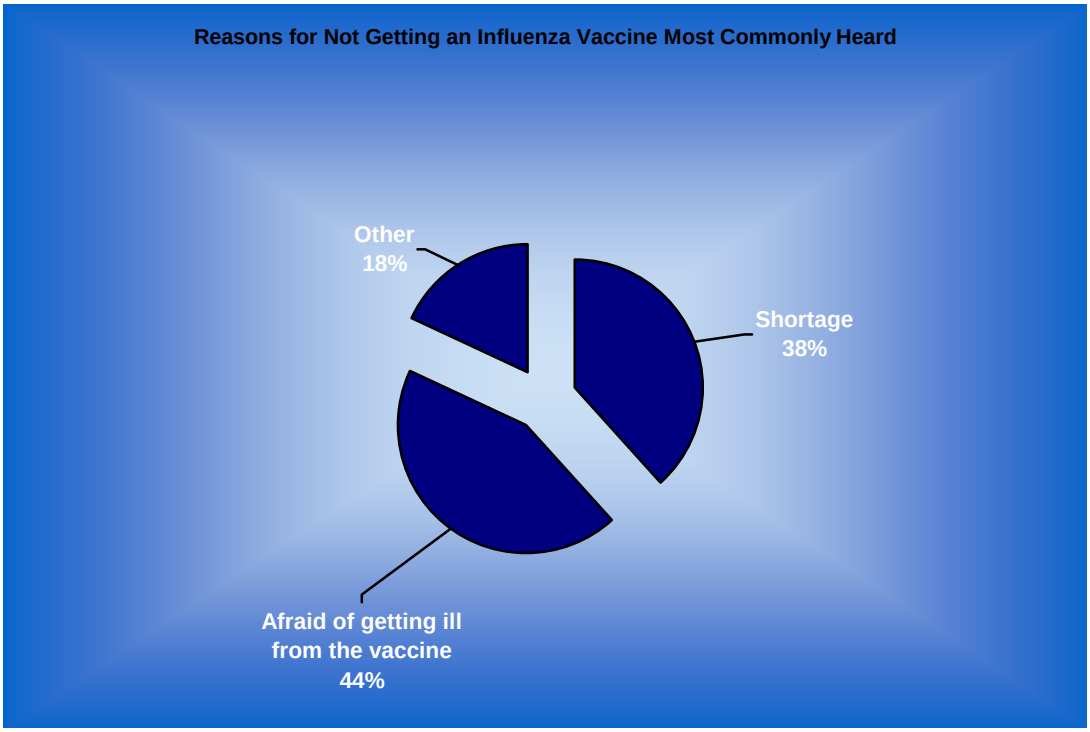
There was a small percentage of HCW who declined the vaccine in January, citing that it was too late to provide protection. In the 2004-2005 season, however, this was not the case, since the number of cases did not peak until February. There is typically a two week window from the time of vaccination to the time of seroconversion providing immunity. Figure 2 demonstrates that the actual peak of cases seen by sentinel physicians in Indiana did not occur until the eighth week of the year, which is near the end of February.

Figure 2



Other reasons, for not being vaccinated, cited in the survey, included fear of vaccine contamination fueled by media reports of Chiron's quality control issues. None of the vaccine from Chiron was ever utilized. Also reported was fear of immunizations, contraindications, and a variety of other reasons. The most prevalent reason cited for not being vaccinated, however, was a fear of being infected with influenza from the vaccine (Figure 3).

Figure 3



According the CDC BRFSS 2005 Flu Vaccination Report , 41.8 percent of the total people surveyed thought they did not need the vaccine, while only 8.3 percent had concern about the vaccine. In the same report, 34.2 percent of HCW cited the vaccine shortage as the reason for not getting the vaccine.

The CDC Morbidity and Mortality Weekly Report (MMWR) from March 2005 included a report on an educational campaign in California and Minnesota to improve the influenza vaccination rates of HCW. The campaign clearly demonstrated that the "*vaccination of health-care workers has been shown to reduce influenza infection and absenteeism among HCW, (1) prevent mortality in their patients (2), and result in financial savings to sponsoring health institutions*".

In this campaign, two educational efforts were utilized: 1) a series of in-services, fact sheets, handouts and posters, providing education on the seriousness of influenza and employee misconceptions about the vaccine, and 2) "vaccine days" were advertised offering influenza vaccination at no cost on specific days to employees. When both education and advertisement measures were utilized, the vaccination rate increased from 27 to 53 percent.

In Minnesota's Veterans Affairs Medical Center, the strategy of education and convenience to improve their vaccination rate from a less than 25 percent in the mid-1980s to 65 percent in 2003-2004 influenza season proved very successful. The center initiated a "Mobile Vaccination Cart Program". This program brought the vaccinations to each ward at a specific time and provided both streamlined documentation and convenience.

At Minnesota's Mayo Clinic, free vaccinations were offered along with incentives such as movie tickets and books. This coupled with advertisement, and bringing the vaccine to the departments and wards again improved the vaccination rate.

In Public Health Preparedness District 2, out of the 43 institutions surveyed, all but two offered the vaccine at reduced or no cost to their employees. This is half the battle. It is obvious that increasing the vaccination rate at all levels not only saves time and resources but also saves lives. The most effective means for increasing the vaccination rate among HCW that have direct patient contact is a three-fold approach. First, has already been accomplished by offering the vaccine at no cost. Secondly, education about influenza and ease of transmission as well as risk of potential life lost is necessary to raise awareness. The final approach is bringing the vaccine to those that should get it. The mobile "vaccination cart" method and streamlining of paperwork is highly effective. The agencies that comprise District 2 should start planning and improving their methods of promoting vaccination among HCW, especially those with direct patient contact. Not every method mentioned above will work in every facility; however, the basics of availability of vaccine, convenience and education appear to be the best strategy.

References

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